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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte CHRISTOPHER CRIM,
STEPHEN IREMONGER,
and L. LEE MCINTYRE

_____

Appeal 2009-000613
Application 09/771,143
Technology Center 2100

_____

Decided: February 3, 2010

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Before HOWARD B. BLANKENSHIP, CAROLYN D. THOMAS, and
JAMES R. HUGHES, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final

rejection. Appellants appeal the rejection of claims 11-15 and 38-42, which

are all of the remaining claims in the application. We have jurisdiction

under 35 U.S.C. § 6(b).

We reverse.

Invention

Appellants' invention relates to techniques for providing limited access to data stored in records of databases. Abstract.

Representative Claim

11.   A method of controlling access to records stored in a database, said method comprising:

identifying a password that is associated with one or more users of said database;

defining a calculation expression for said identified password, wherein said calculation expression is a variable expression defined based on at least one field of data used in a plurality of records stored in said database, wherein said calculation expression can be evaluated at least partly based on said at least one field of data used in said plurality of records, wherein said at least one field of data is a variable which may have different values for each of said plurality of records, thereby allowing access to each individual record of said plurality of records to be selectively controlled based on at least one value of said at least one field of data stored for each of said plurality of records of said database, and wherein said calculation expression defines access privileges of said one or more users with respect to at least one operation that may be requested to be performed by said one or more users on said plurality of records of said database;

receiving a request to perform said at least one operation on said plurality of records of said database, said request being identified

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as a request made by said one or more users associated with said
password; and

       evaluating said calculation expression for each of said plurality
of records, based on said at least one field of data, when said request
has been received, wherein said evaluating comprises: (a) determining
at least one value for said at least one field of data stored for a first
record of said plurality of records, (b) using said at least one value as
input to said calculation expression to evaluate said calculation
expression for said first record, and (c) determining a first result for
said calculation expression based on said evaluation of said
calculation expression for said first record, wherein said first result
effectively indicates whether to grant access to said first record.

Prior Art

Bapat   6,236,996 B1   May 22, 2001

R. Elmasri, et al., *Fundamentals of Database Systems*, p. 718
(Addison Wesley 3rd ed., 2000) ("Elmasri").

Examiner's Rejections

Claims 11 and 38 stand rejected under 35 U.S.C. § 112, second
paragraph as being indefinite for failing to particularly point out and
distinctly claim the invention.

Claims 11-15 and 38-42 stand rejected under 35 U.S.C. § 103(a) as
being unpatentable over Bapat and Elmasri.

Claim 11 Is Representative

We will consider the two grounds of rejection in turn and discuss claim 11 as representative. Claims 11 and 38 are the only independent claims on appeal, each containing the limitations in controversy.

ISSUES

(1)   Have Appellants shown that the Examiner erred in finding that "identifying and evaluating the next records" is an omitted essential step that renders claim 11 indefinite?

(2)   Have Appellants shown that the Examiner erred in finding that the combination of Bapat and Elmasri teaches "evaluating said calculation expression for each of said plurality of records" as recited in claim 11?

PRINCIPLES OF LAW

The Examiner bears the initial burden of presenting a prima facie case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS -- § 112, SECOND PARAGRAPH

The Examiner finds that claim 11 recites receiving a request to perform at least one operation on said plurality of records, and evaluating a calculation expression for each of said plurality of records. The Examiner submits that the "evaluating" from lines 23 through 29 of the claim is performed only for a "first record." The Examiner concludes that the claim omits the step of "identifying and evaluating the next records" as disclosed in instant Figure 10. Ans. 4, 23.

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However, the rejection fails to explain why the step of "identifying and evaluating the next records" is an essential step for the subject matter of claim 11. The rejection, at best, merely points out that material described by the drawings is not expressly set forth in the open-ended "comprises" portion of the "evaluating" step of the claim.

Thus, we agree with Appellants to the extent that the rejection fails to demonstrate that claim 11 is indefinite under 35 U.S.C. § 112, second paragraph.

FINDINGS OF FACT

1. Bapat discloses an access control database that has access control objects collectively storing information specifying access rights by users to specified sets of the managed objects. Abstract.

2. The format of each row in the database tables preferably includes a field called the "fully distinguished name" (FDN) of a managed object followed by columns of data: Data 1, . . . , Data N. Preferably, the FDN for each row represents the tree path (through the managed object tree) for the managed object whose information is stored in that row. The tree path for an object may be represented in the form "/a/b/c/ . . ." where a, b, and c indicate nodes along the tree path. For example, an FDN can look like:

/systemid="sys1"/owner="accompany"/devicetype="router"/. . .

The FDN operates as the primary key to the data stored in the table. Using security mechanisms, the FDN is used as the key that determines which managed objects that a particular user is permitted to access or modify. Fig. 11A; col. 19, ll. 23-40.

3.   Access control for a particular user on a particular managed object is defined by a permissions table or tables. Preferably, the present invention has an access Grant table and an access Deny table. Each table stores permission entries. Col. 26, ll. 10-14.

4.   A permission entry 1502, 1504 is tuple having three fields, as shown below:

(user name, object name, operation type).

Although Figures 15A and 15B show the object name in each permission entry as a single word, preferably the object name is the FDN for a managed object.

The user name is the name of the user (or group of users) whose access rights are represented by the permission entry, the object name identifies the managed object to which the permission entry applies, and the operation type is the operation that the specified user is being granted or denied with respect to the specified object. The operation type can be a select, delete, insert or update operation. Figs. 15A and 15B; col. 26, ll. 28-41.

5.   Enforcement of Access Control Rules based on permission tables is done according to the following algorithm, which assumes that an operation is requested by user U1: "1. . . . 4. Check the Grant table to see if User U1 has specific granted items, and grant access if the current operation matches the operation specified in the Grant table." Col. 27, l. 45 to col. 28, l. 3.

6.   Step 1614 represents the action of the access control procedure 404, which limits access to the management information stored in the set of database tables. The access control procedure uses the set of access rights

stored in the permissions table to determine which, if any, of the rows of data specified by the intercepted query are accessible by the user. Fig. 16A; col. 29, ll. 37-43.

ANALYSIS -- § 103(a)

The Examiner finds that "evaluating said calculation expression for each of said plurality of records, based on said at least one field of data, when said request has been received" as recited in claim 11 encompasses enforcing access control by checking a user name and a fully distinguished name (FDN) in a received SQL command to a row of a permission table containing the FDN and the user name. Ans. 7-8, 19-20. In particular, the Examiner finds that the FDN is a field of data (Ans. 15), the SQL command is a received request (Ans. 8), each row in the permission table is a calculation expression (Ans. 6), and the calculation expression is evaluated by checking the user name and FDN in the received command to a row of the permission table containing the FDN and the user name (Ans. 6-8, 19-20).

Appellants contend that Bapat does not teach or suggest a single expression that can be evaluated to define access for multiple records. App. Br. 11-12. The Examiner responds that the phrase "evaluating a calculation expression multiple times" is not recited in claim 11. Ans. 20. However, claim 11 recites "evaluating said calculation expression for each of said plurality of records." The Examiner has not explained how the same calculation expression is evaluated "for each of said plurality of records" as recited in claim 11.

Although Bapat discloses using the set of access rights stored in the permission table to determine which, if any, of the rows of data specified by an intercepted SQL request are accessible by the user, Bapat does this by matching the FDN for the object specified in the user's request with the FDN in a row of the permission table containing the user's name, then using the access rights in that row to grant or deny user access to the corresponding object in the database. FF 2-6. Bapat has not been shown to disclose comparing the same FDN in the user's request with the FDN for each of a plurality of records in the database. Therefore, Bapat does not teach "evaluating said calculation expression for each of said plurality of records" as recited in claim 11.

Therefore, the rejection fails to set forth a prima facie case of obviousness of the subject matter of claim 11.

CONCLUSIONS OF LAW

(1)   Appellants have shown that the Examiner erred in finding that "identifying and evaluating the next records" is an omitted essential step that renders claim 11 indefinite.

(2)   Appellants have shown that the Examiner erred in finding that the combination of Bapat and Elmasri teaches "evaluating said calculation expression for each of said plurality of records" as recited in claim 11.

DECISION

The rejection of claims 11 and 38 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the invention is reversed.

The rejection of claims 11-15 and 38-42 under 35 U.S.C. §103(a) as being unpatentable over Bapat and Elmasri is reversed.

REVERSED

msc

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